

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1, 2, 6-11, 15-20, 24-29, 33-35, 50 and 51 are in this Application. Claims 9-11, 15-20, 24-29, 33-35 and 51 have been rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 2, 6-11, 15-20, 24-29, 33-35, 50 and 51 have been rejected under 35 U.S.C. § 102. Claims 1, 2, 9, 10, 11, 18, 19, 20, 27 and 28 have been amended herewith. New claims 52 and 53 have been added herewith.

*Claim Objections*

The Examiner objected to claims 1, 9, 18 and 27 for reciting "detecting of restoration of said Ras signaling" in step (b) which encompasses conditions in which restoration would not be expected. The claims have been cosmetically amended in accordance with Examiner's suggestion.

The Examiner has required further cosmetic amendments to overcome objections to claims 10, 18, 19, 27 and 28. The claims have been cosmetically amended in accordance with Examiner's suggestion.

*35 U.S.C. § 112 Rejections*

The Examiner rejected claims 9-11, 15-20, 24-29, 33-35 and 51 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner rejection is respectfully traversed.

Specifically, the Examiner states that claims 9, 18 and 27 are vague and indefinite in that the metes and bounds of "a second polynucleotide of a library of polynucleotides" are unclear. The claims have now been cosmetically amended in accordance with Examiner's suggestion rendering moot Examiner's rejections in this case.

The Examiner has further stated that claim 18 is vague and indefinite in that the metes and bounds of "each operably linked to a first inducible promoter" are unclear. The claim has now been cosmetically amended in accordance with Examiner's suggestion rendering moot Examiner's rejections in this case.

**35 U.S.C. § 102(a) Rejections**

The Examiner has rejected claims 1, 2, 6-11, 15-20, 24-29, 33-35, 50 and 51 under 35 U.S.C. § 102(a) as being anticipated by Takemaru and Moon, The Journal of Cell Biology 149(2), April 17, 2000. The Examiner's rejections are respectfully traversed. Claims 52 and 53 have now been added.

The Examiner states that Takemaru and Moon teach a method of identifying interactions between polypeptides comprising use of Ras mutant cells. The cells were transfected with a first inducible promoter encoding a polypeptide capable of interacting with a plasmalemma. The cells were further transfected with a second polynucleotide comprising a fusion of a second polynucleotide and a Ras cytoplasmic mutant under ADH1 promoter which is an inducible element according to the Examiner.

As repeatedly noted in previous communications (e.g., see communication filed on August 14, 2006 and November 17, 2006) the Takemaru and Moon reference addresses an entirely different set of proteins than the claimed invention, as can be directly elucidated from their teachings, which do not read over the claimed invention.

In addition, contrary to Examiner's assertion, the ADH1 promoter described by Takemaru and Moon is a strong constitutive promoter on glucose and galactose which can be repressed 2-10 fold in medium containing non fermentable carbon such as: acetate, glycerol and methanol (See e.g., Mumberg et al. 1995, Gene 156:119-122, attached. Specifically, on page 120 in the experimental and discussion section, first paragraph describes the constitutive nature of the ADH1 promoter and it's inducibility 2-10 in non-fermentable sugar). However, none of these carbon sources were used by Takemaru and Moon on page 250 in the experimental procedure. Takemaru and Moon describes RRS screening protocol switching between glucose and galactose non of them is a non-fermentable carbon source, thereby strongly pointing out that even if ADH1 was included, its inducible properties were not exploited.

This is in sharp contrast to the claimed invention where different inductive conditions are used to control expression of bait and prey proteins from two distinct inducible promoters i.e., the Met and Gal1 promoters.

Since, Takamaru and Moon do not teach all the elements of the presently claimed invention, the *prima facie* case of anticipation is fully rebutted. For these reasons, the rejection of the pending claims as anticipated must be withdrawn.

While strongly traversing the above reference, Applicant, in order to simplify the issues, attaches herewith a Declaration under 37 C.F.R. §1.131 by Applicant Ami Aronheim in which he shows conception and reduction to practice of the claimed invention prior to the effective publication date of Takemaru and Moon, which is the April 17, 2000. Exhibit A, which is the invention disclosure directed to Applicants former representative describes in great detail the novel approach to study protein-protein interactions for membrane proteins. The bait (known) protein is expressed in its natural environment, the membrane, while the prey (second polypeptide) is fused to the cytoplasmic mutant Ras. Protein interaction results in Ras membrane recruitment and activation of viability pathway. The dual inducible expression system and its significance are also described. As well as results obtained using specific transmembrane protein bait.

In view of the above declaration, the reference to Takemaru and Moon is not prior art reference relative to the instant application, and the sole rejection of the claims over Takemaru and Moon is no longer valid and should be withdrawn.

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In view of the above amendments and remarks it is respectfully submitted that claims 1, 2, 6-11, 15-20, 24-29, 33-35, 50-53 are now in condition for allowance. Entry of the foregoing amendment and prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



Martin D. Moynihan,  
Registration No. 40,338

July 9, 2007

Enclosures:

Declaration under 37 C.F.R. §1.131 signed by Ami Aronheim

Exhibit A

Exhibit B

Mumberg et al.



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ami ARONHEIM et al

Serial No.: 09/777,856

Filed: February 7, 2001

Group Art Unit: 1636

For: NUCLEIC ACID CONSTRUCT  
SYSTEM AND METHOD  
UTILIZING SAME USEFUL  
FOR IDENTIFYING PROTEIN-  
PROTEIN INTERACTIONS

Examiner: Maria Marvich

Attorney  
Docket: 01/21605Commissioner for Patents  
P. O. Box 1450  
Alexandria VA 22313DECLARATION UNDER 37 CFR §1.131

I, Ami Aronheim am a co-inventor of the invention described and claimed in the above-identified U.S. Patent Application declare as follows:

1. I am familiar with the Official action mailed on February 8, 2007, with respect to the above-identified application, in which the Examiner cited Takemaru and Moon, *The Journal of Cell Biology* 149(2), April 17, 2000 to reject claims 1-2, 6-11, 15-20, 24-29, 33-35 and 50-51 under 35 U.S.C. 102(a).

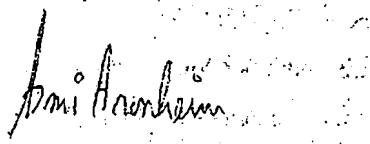
2. That the publication date, and thus the 35 U.S.C. §102(a) date of the Takemaru and Moon reference is April 17, 2000.

3. That the aforementioned publication of Takemaru and Moon is not prior art to our invention, inasmuch as I and my co-inventors had actually reduced to practice, and thus made our invention, prior to the April 17, 2000 publication date of Takemaru and Moon.

4. In evidence of such reduction to practice, I attach herewith a copy of the disclosure of the present invention sent to my former representative (Exhibit A) and his acknowledgment (Exhibit B) both on dates (blacked out) which are prior to the April 17, 2000 publication date of Takamaru and Moon. Exhibit A is a detailed disclosure describing conception and the successful reduction to practice of our claimed invention along with its advantages as well as results obtained using same. The method is described both verbally and schematically (see flow chart in Figure 4 of Exhibit A). The significance of using double inducible promoters is also indicated (see Figure 3 and corresponding description in Exhibit A). An enabled example of the approach is also provided (see Figure 3 and corresponding description in Exhibit A).

5. That the rejection of claims of our invention over Takemaru and Moon should be withdrawn since Takemaru and Moon is not prior art relative to the invention that is the subject of the above-identified patent application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



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Dr. Ami Aronheim

Dated: July 4, 2007